

The police officer tickets you for going 65 miles per hour in a 60 mph zone. You tell her that you are very conscientious about your speed and are certain that you were only going 60 miles per hour. And you're telling the truth since you happened to glance at the speedometer when you saw the lights in your rear view mirror. What's going on?

Is it possible that your recent purchase of snow tires has affected the speedometer? Your original tires had a diameter of 24.25 inches. What would the diameter of the snow tires have to be to give a speedometer reading of 60 mph when you were actually traveling at 65 mph? Are the snow tires the likely cause of your incorrect speedometer reading? Why or why not?